

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-16 (Canceled).

Claim 17 (Previously Presented): The lithium secondary battery according to claim 21, wherein the cathode further contains polyvinylidene fluoride as a binder.

Claims 18-20 (Canceled).

Claim 21 (Currently Amended): A lithium secondary battery comprising a cathode, an anode and a polymer-based solid electrolyte in a solvent, wherein a lithium-containing composite oxide comprising lithium cobalt oxide and a subordinate component element M, wherein M is ~~a transition or other metal element exclusive of Li and Co~~ Nb, in an amount of ~~0.001~~ 0.1 to 2 at% relative to cobalt in the lithium cobalt oxide, is a cathode active substance of the cathode,

the solvent comprises  $\gamma$ -butyrolactone, and the concentration of  $\gamma$ -butyrolactone in the solvent is 75 to 85% by volume.

Claims 22-23 (Canceled).

Claim 24 (Previously Presented): The lithium secondary battery according to claim 21, wherein the anode comprises a carbonaceous material.

Claim 25 (Previously Presented): The lithium secondary battery according to claim 21, wherein the polymer-based solid electrolyte is gelled.

Claim 26 (Previously Presented): The lithium secondary battery according to claim 25, wherein the polymer-based solid electrolyte has a thickness of 5 to 100  $\mu\text{m}$ .

Claim 27 (Previously Presented): The lithium secondary battery according to claim 25, wherein the polymer-based solid electrolyte has a thickness of 5 to 60  $\mu\text{m}$ .

Claim 28 (Previously Presented): The lithium secondary battery according to claim 25, wherein the polymer-based solid electrolyte has a thickness of 10 to 40  $\mu\text{m}$ .

Claim 29 (Currently Amended): The lithium secondary battery according to claim [[21]] 25, wherein the polymer-based solid electrolyte comprises a homopolymer of poly(vinylidene fluoride).

Claim 30 (Previously Presented): The lithium secondary battery according to claim 29, wherein the homopolymer of poly(vinylidene fluoride) is produced by an emulsion polymerization process.

Claim 31 (New): The lithium secondary battery according to claim 25, wherein the solvent additionally comprises ethylene carbonate.

Claim 32 (New): The lithium secondary battery according to claim 25, which additionally comprises  $\text{LiBF}_4$  as electrolyte.